

**ABSTRACT OF THE DISCLOSURE**

5 A system and method for establishing a plurality of operating parameters of a multiphase motor. The plurality of electrical parameters may be established from stator resistance data and electrical input data. The system and method may be used to decompose the electrical input data into a positive sequence and a negative sequence. The positive sequence may be used to establish a plurality of electrical parameters of the motor. The plurality of electrical parameters may be used with the positive sequence and negative sequence to establish the output power of the motor.